

Table. Deficiencies of Evidence-Based Best Practice Principles in Error Analyses of Wrong-Site Operative Procedures

ASSESSMENT*	YES	NO	UN- KNOWN	NA	% YES OR NO	% YES OF YES/NO	% NO OF YES/NO	EVIDENCE-BASED BEST PRACTICE PRINCIPLE†
The correct site was specified on the schedule.	80%	9%	2%	9%	89%	90%	10%	1. The correct site of the operation should be specified when the procedure is scheduled.
The name of procedure(s) was stated correctly on the consent. The correct site/side/level/digit was clearly stated on the consent.	80%	13%	6%	1%	93%	86%	14%	3. The correct operation and site should be specified on the informed consent.
The person obtaining the scheduling information verified the information provided from the surgeon's office.	61%	5%	15%	19%	67%	94%‡	6%	4. Anyone reviewing the schedule, consent, history and physical examination, or reports documenting the diagnosis, should check for discrepancies among all those parts of the patient's record and reconcile any discrepancies with the surgeon when noted.
All information from the surgeon's records was available in the operating suite for verification against primary sources of information.	78%	5%	6%	11%	83%	93%	7%	5. The surgeon should have supporting information uniquely found in the office records at the surgical facility on the day of surgery.
A member of the operating room (OR) staff performed the preoperative reconciliation.	83%	8%	6%	3%	91%	91%	9%	6. All information that should be used to support the correct patient, operation, and site, including the patient's or family's verbal understanding, should be verified by the nurse and surgeon before the patient enters the OR. 6A. RN should verify preoperatively.
Preoperative verification against the consent and patient records was done by the surgeon prior to the time-out.	67%	17%	6%	9%	84%	80%	20%	6B. Surgeon should verify preoperatively.
Verification of patient's information about full name, date of birth, procedure, and correct site or side, if any, was done with identification (ID) band, consent, schedule, and surgeon's documents in the patient's record.	91%	8%	2%	0%	98%	92%	8%	6C. All information, including patient's information, should be verified preoperatively.
All information was verified by the registered nurse (RN) preoperatively.	78%	16%	6%	0%	94%	83%	17%	6A, 6C. RN should verify all information.
All information was verified by the RN and the surgeon preoperatively.	63%	29%	9%	0%	91%	69%	31%	6A, 6B, 6C. The RN and the surgeon should verify all information.
The patient was asked to state his or her full name, date of birth, procedure, and correct site or side, if any.	78%	13%	6%	2%	91%	86%	14%	7. All verbal verification should be done using questions that require an active response of specific information, rather than a passive agreement.
The patient identified by stating full name and date of birth was verified by preoperative RN using patient name and date of birth on ID band.	95%	2%	3%	0%	97%	98%	2%	8. Patient identification should always require two unique patient identifiers.

Table. Deficiencies of Evidence-Based Best Practice Principles in Error Analyses of Wrong-Site Operative Procedures (continued)

ASSESSMENT*	YES	NO	UN-KNOWN	NA	% YES OR NO	% YES OF YES/NO	% NO OF YES/NO	EVIDENCE-BASED BEST PRACTICE PRINCIPLE†
The surgeon reconciled any discrepancies using original documents.	1%	5%	4%	91%	5%	95%‡	5%	9. Any discrepancies in the information should be resolved by the surgeon, based on primary sources of information, before the patient enters the OR.
Marked properly with verification.	34%	41%	7%	18%	75%	56%‡	44%	10. The site should be marked by a healthcare professional familiar with the facility's marking policy, with the accuracy confirmed both by all the relevant information and by an alert patient or patient surrogate if the patient is a minor or mentally incapacitated.
The operative site was marked with the physician's initials.	31%	40%	5%	24%	71%	43%	57%	11. The site should be marked by the provider's initials.
The time-out was done in the OR.	81%	16%	2%	0%	98%	83%	17%	13. Separate formal time-outs should be done for separate procedures, including anesthetic blocks, with the person performing that procedure.
The incision was made after the time-out.	61%	6%	2%	31%	67%	91%	9%	14. All noncritical activities should stop during the time-out.
The operative site marking was visible during the time-out.	53%	22%	2%	23%	74%	71%	29%	15. The site mark should be visible and referenced in the prepped and draped field during the time-out.
Verification in the time-out included verification of correct patient, with identification with ID wristband and chart, and verification of procedure and site.	50%	21%	24%	5%	71%	70%	30%	16. Verification of information during the time-out should require an active communication of specific information, rather than a passive agreement, and be verified against the relevant documents.
The time-out involved the surgeon, anesthesia provider, nursing staff, and surgical technician.	70%	19%	5%	6%	88%	79%	21%	17. All members of the operating team should verbally verify that their understanding matches the information in the relevant documents.
A member of the operating team raised a specific concern about possible wrong-site surgery at any point before the incision, when the time-out verification or site mark were questionable.	8%	50%	2%	41%	57%	50%‡	50%	19. Operating team members who have concerns should not agree to the information given in the time-out if their concerns have not been addressed.
The surgeon responded to a specific concern a member of the operating team voiced about possible wrong-site surgery.	10%	3%	2%	84%	13%	97%‡	3%	20. Any concerns should be resolved by the surgeon, based on primary sources of information, to the satisfaction of all members of the operating team before proceeding.
Written interpretation of intraoperative images relevant to the case were available in the OR within the time needed to make intraoperative decisions.	27%	14%	6%	53%	41%	85%‡	15%	21. Verification of spinal level, rib resection level, or ureter stented should require radiological confirmation, using a stable marker and readings by both a radiologist and the surgeon.

* Total number of responses is 129 for each assessment.

† Best practice principles 2, 12, and 18 were not assessed.

‡ "Yes" responses, when compared to "No" responses, include "NA" responses.